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ABSTRACT

A series of studies at the University of Michigan have explored information systems as a basis for learning environments. In this paper, the staff at the Center for Research on Learning and Teaching (CRLT) looked at educational uses of computer-based conferencing, such as computer-based seminars and computer-assisted curriculum development. Other uses, such as computer-based committee and computer-aided proposal preparation, have found the basic software developed at CRLT to be applicable. A rationale for the use of computer assistance in seminars, curriculum development, and other educational activity, with a check list for the potential organizer of a conference is given. Data on phase one of a study of conferencing applied in seminars and individual study, along with costs, time commitments, and benefits are presented, along with a discussion of implications of computer-based educational communications for the University of Michigan. (HAB)

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Computer-based educational communications at the University of Michigan

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(25 February 1976)
Center for Research on Learning and Teaching
University of Michigan (313/763-4410)

A series of studies at the University of Michigan has explored information systems as a basis for learning environments (Zinn, 1974). Currently staff at the Center for Research on Learning and Teaching (CRLT) is looking at educational uses of computer-based conferencing, for example, computer-based seminars and computer-assisted curriculum development. Some departments considering other uses, for example, computer-based committee and computer-aided proposal preparation, find the basic software developed at CRLT to be applicable. However, some of the procedures are modified for the particular purposes.

A paper now in preparation by the same authors reports the history of computer-based conferencing at the University of Michigan. In brief, the activity did not become practical until the spring of 1975 when the CONFER I program was completed by Robert Parnes. The conferencing software did not receive much use outside the circle of people interested in the software development until CONFER II became operational in the fall. Experience to date provides clear indication of the scope of conferencing applications and the needed resources.

The first section of this note gives a rationale for the use of computer assistance in seminars, curriculum development and other educational activity. It concludes with a checklist intended for the potential organizer of a conference. The second section provides data on phase one of a study of conferencing applied in seminars and individual study. The third section discusses costs, time commitments and benefits. A fourth section describes implications of computer-based educational communications for the University of Michigan.

IR 003 662

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I. RATIONALE FOR COMPUTER ASSISTANCE

Four Instances

In the seminar situation computer assistance contributes in an interesting way to the interaction between teachers and students, among teachers, and among students. For example, the remarks of a resource person called upon near the beginning of a seminar are recorded and conveniently available for later resource people to review and to build upon for their contributions. A very primitive but apparently effective implementation of this kind of computer assistance has been used in the University of Michigan medical curriculum for some time (Gordon Nordby and Raymond Kahn, 1971). The substance of each lecture in a core sequence for medical students is entered into a computer file. Each succeeding lecturer in a series involving many professors can use the computer to review, within his or her conceptual structure, what has been presented to the students before, and thereby build upon instead of duplicating previous material when lecturing to the class.

In the independent study situation, a student can see the comments of others, even some development of arguments in writing, before writing a paper for presentation to his or her seminar. At the same time, the computer message facility may be used to bring together spontaneous discussion groups and other social interaction. An unusual course on mathematics as humanism (developed by Manfred Kochen during the last five years) exploits computer-based communication for this purpose.

The instructor may use the conference to control the introduction of new material. For example, he or she may wait until nearly all students have seen a particular item and perhaps committed themselves to a position in response to it before setting up the next stage of discussion. In a poetry course at Brown University using computer assistance (Van Dam, 1975) a student must enter some interpretation of a poem before the computer procedure makes additional information available about background of that poet. William Ingram and Eric Rabkin are adapting this technique for use in English at the University of Michigan.

Different views emerge readily in the conferencing format. Two or more individuals may enter comments on a controversial item simultaneously without one interfering with the flow of ideas of the other. On the other hand, the hesitant speaker has ample time to organize a careful comment and introduce it into a discussion in a timely fashion.

This kind of communication characterizes discussion in a staff-student seminar on computer-based education systems. Furthermore, the conference organizer encourages entering anonymous comments which establish unpopular or self-conscious positions which might not otherwise be introduced into the discussion at all.

Some members of a seminar do not participate readily. For example, some people are reluctant to commit their preliminary ideas to writing or do not type easily. The procedures of the conference should accommodate individual preferences and skills.

The Contribution of Teleconferencing to Interdisciplinary Studies

Many interesting interdisciplinary discussions--potential conferences--arise in the course of University activities. Persons from different departments come together in social and recreational activities; some meet to conduct committee work; and incidental occasions arise such as in a chance meeting, in community activities and the like. Many potential benefits are not realized from these situations because continuing communication about topics not a part of specific disciplines is difficult to maintain. Face-to-face meetings are difficult to schedule or occur only incidentally during other activities; the frame of reference of another discipline, necessary to understanding a contribution to the discussion, may be difficult to acquire; progress may appear to be much slower than on work within one's own discipline.

Teleconferencing can help bring people together conceptually as well as overcome the obstacles of scheduling a meeting time and place. Selected resource materials from all contributing disciplines are conveniently accessed by all participants through computer assistance in the conference. A record of contributions is maintained for the information of all.

Summaries and interpretations are entered by participants and periodically by staff for the conference. Each participant works at his or her convenience; use of telecommunications media should exploit the storage function so that past entries are available to new participants, to those who have been absent for a time, and as needed by those who wish to review and interpret progress. Conferences are made "public" simply by removing restrictions on access to the computer files and providing summaries which encourage a wide audience and perhaps additional participation. Functioning as an electronic bulletin board, a teleconference helps to identify people throughout a community who are interested in discussing issues and working together toward solution of problems. Special topics such as consideration of values in college teaching have been approached through computer-based conferences.

Very few committees, conferences or courses operate with the aid of telecommunications, except for occasional telephone conversations to check on information or to schedule face-to-face meetings. Teleconferencing is to be tried by those significant groups which are not otherwise productive because the schedules and priority systems of participants do not permit the pleasant inefficiencies of traditional means. Multi-disciplinary groups tend to suffer just that situation. Indeed, the right kind of facility for teleconferencing will make it easier for a program to call on faculty members from different disciplines for contributions to curriculum decisions. The executive committee of a multi-disciplinary program on regional and urban planning is considering computer-based conferencing for committee discussions and counseling.

The Center for Research on Learning and Teaching (CRLT) has experience with several kinds of teleconferencing. Advisors for a project on instructional use of computers in colleges throughout southeastern Michigan worked through computer files on MTS (the University of Michigan computer system) accessed through the MERIT Computer Network. Such interaction proved much more productive than telephone conference calls and evoked more prompt responses than successive drafts of committee work by mail. The staff organized information in the computer files to call attention to key issues. The same approach has since been applied to working sessions, document production and decision making related to program development for instructional use of computers. The pilot conference-seminar on computer-based education systems now in progress is described in the next section.

Checklist for Deciding on Use of Conferencing

Characteristics of the group:

- size
- distribution (location)
- background (points of view)
- interest in communicating
- value placed on a written product

Characteristics of the topic:

- complexity
- alternate approaches
- adequacy of written communication
- possibility of written outcomes
- role of reference information
- changing information

Resources and scheduling considerations:

- access to conference computer
- access to user terminals
- frequency of participation (replacing meetings)
- staff for technical assistance
- deadline for reports
- provisons for off-line activity (listings, indexes, etc.)

Incentives to use conferencing:

- save travel cost
- increase meeting efficiency
- record conference progress (research, credit to contributers, etc.)
- open meetings to wider "audience"
- explore new means for education
- develop new skills for interaction with colleagues
- research new tools of decision making

II. DATA ON INITIAL EXPERIMENTS

A computer-based seminar on computer-based educational systems was begun in October of 1975. The first phase of the seminar ran through January of this year. Results of that experience are reported here.

The seminar was publicized by use of a special interest group mailing list at the University of Michigan and many personal contacts. A group of 150 people who had at some time expressed interest in receiving information about instructional use of computers was sent a preliminary notice in October stating the purposes and general means of conducting the seminar. Those who responded were then sent the detailed instructions on how to enter the computer-based seminar.

The general mailing was supplemented by bulletin board notices and some personal contacts intended especially to reach students who were not on the special interest group mailing list. Each person receiving detailed information about the computer-based seminar was encouraged to extend the invitation to others. Indeed, any user of the computer system needed to know only one simple command to enter the seminar.

Information about using the conference software as well as a guide to procedures of the seminar could be obtained from the computer. However, most of the participants used a printed Reference Guide to save the time and computing resources consumed by listing the same information on-line.

A third mailing was made after the seminar was under way to remind those people who had expressed interest but not yet registered on-line that the seminar was in progress. Mailings of reproductions of the substance of the seminar were also made to three individuals who wished to participate using mail and telephone rather than by direct access through the computer. In January, 36 students and staff were participating.

The seminar did not have a single teacher. One of the advantages of computer-based seminar communications is that anyone can come forth in the teaching role without imposing on others. Individuals who are

hesitant to extemporize in the seminar have an opportunity to enter carefully developed statements of fact or opinion. Individuals who would otherwise dominate a seminar can be "turned off" by the listeners at the time of receiving communications without any direct offense.

A conference "organizer" is given privileged status. Notices are posted by this individual in a more public place than individual notices. Announcements broadcast to all individuals on entering or leaving a conference are determined by the organizer. Assignment of items in the seminar to categories of the agenda is done by the organizer. However, the major activity of the seminar is carried on through item, individual notice and message facilities to which all participants have equal access.

In the seminar on computer-based education systems the organizer provided an interface between the participants and others in the University community, and some at other universities and colleges in North America. That is, items or questions entered which might be answered by persons not registered in the seminar were routed by mail or relayed by telephone to these other individuals; their responses were typed in by the organizer.

Phase 1 of the seminar was intended to define the agenda, identify willing participants, try out the software and procedures, and gather preliminary data on effectiveness. Credit was offered through a graduate course listing on computers in college teaching; no one enrolled for credit during Phase 1. Phase 2 is directed at considerations of providing credit instruction. At the same time, the staff and faculty interested in the topic are expected to become even more active in the seminar discussing matters of University resources and policy for instructional computing. This opportunity to participate in practical discussion of real issues makes the seminar very useful for graduate students in higher education.

Sample Interaction with the Computer-based Seminar

Written transcripts of interaction through the computer among participants in the computer-based seminar cannot capture the facility

with which one can work through seminar material. A video tape is being prepared which shows the CRT display and provides through the audio track a commentary by the participant explaining what she is accomplishing through the interaction. The full description would take more space than is available here. However, an annotated sample is attached.

Evaluation of Initial Use of the Computer-based Seminar Software

A full-scale evaluation is not intended until Phase 2 of the seminar. However, descriptive data collected during Phase 1 confirm the usability of the computer software.

Records of use show the full range of participation intended. The average rate of participation for individuals varies from five times per week to once every three weeks. The duration of sessions ranges from three minutes to two hours and forty minutes. The "typical" participant enters the conference two times a week for about twenty minutes at a cost in computing resources of just under $3.50 per week.

Participants in the seminar were asked at the beginning to state their purposes and expectations regarding the computer-based assistance. At the end of Phase 1 they were asked to indicate the extent to which their purposes were being met, the ways in which the realities differed from their expectations, and the kinds of changes in the software and procedures which might improve the computer assistance for their purposes.

Phase 1 of this developmental experiment with the computer-based seminar can be judged a success. Participants responded to a general mailing, entered the conference without any direct assistance (sometimes without even the printed Primer), and satisfied at least some of their purposes in computer-based communication on the topic. An agenda has been established which participants are willing to discuss through computer-based communications, the software and related procedures are working well, and the preliminary data confirm the useability of the technique. The costs of participation in the computer-based seminar are quite realistic in comparison with costs of transportation for a distributed group and inconvenience of scheduling meetings involving persons from different academic departments and campus jobs.

In Phase 2 of the seminar the participation for credit from both on-campus and off-campus students will be explored. If the seminar continues to prove successful it will establish a much greater facility for computer contribution to college teaching than that achieved through typical computer-assisted instruction developments.

III. USE COSTS FOR COMPUTER-BASED CONFERENCING

The cost of using CONFER on the Michigan computer (MTS) varies greatly for different people and different conferences. Some people may be signed on as little as a half hour each week, while others may be signed on more than an hour each day, editing files and composing text.

A typical cost for using CONFER is $4 per hour including connect charge, CPU and storage. Charges vary from $2.50 to $5 per hour depending on the time of day and the resources used. For participants within the local calling area of Ann Arbor, computing is the only cost beyond that of having access to a user terminal and phone line.

For participants a local call from the computers at Michigan State and Wayne State Universities, the MERIT Computer Network can be used to minimize communication costs. Communication computers connect the major computer systems at the three largest universities in the state. A user of any one computer has convenient access to programs and data on each other computer in the net. If the user outside Ann Arbor connects using the Network direct access phone number in that other city, no local service charge will be added. The user will pay only for computing time in Ann Arbor (typically $4 per hour).

Computer conferencing is especially advantageous over long distances when compared to travel costs and time. The cost of use from outside of the East Lansing-Ann Arbor-Detroit area is $4 per hour for MTS plus the cost of the telephone connection. Long distance charges range from $10 per hour (Jackson-Ann Arbor) to $13 per hour (Houghton-Ann Arbor). A one-day meeting in Detroit costs a Houghton representative about $200 plus two half-days extra spent in travel ($120 in air fare and local transportation; two days per diem @ $40). Eight hours at a computer terminal in Houghton reading text by others, typing suggested changes, sending and responding to messages, etc., costs about $190. (Two thirds of that is long distance charges, which might be reduced through use of WATS lines.) Typically one's participation in reviewing and finalizing a proposal would be spread out over a few days, and probably one takes less time working through the computer than working face-to-face.

Costs of Equipment. Any computer terminal can be used for conferencing. It is helpful to have one with upper/lower case capabilities, a typewriter-like keyboard, 30 characters per second display and copy that can be passed around or filed.

Minimally-priced equipment has been rented for about $75 per month, or purchased for $1500 with a maintenance cost of $450 per year. These terminals are 30 characters per second typewriters (impact printer), thermal (heat) printers, or CRT (television screen) displays with at least 24 lines of 80-character width displayed at once. For example, participants have used the Telray CRT, the Decwriter II typewriter, and the TI 733 thermal printer.

Equipment with better quality display is available for $150 per month rental fee or $3000 purchase price with $550 yearly upkeep. Block diagrams and simple graphics can be displayed, and sometimes more complicated drawings. The TEK 4023 CRT, and the ComData 300 and GSI 300Q typewriters have been used.

Higher cost equipment permits local storage of information. Text can be prepared and edited without connecting to the computer. Display rates are faster, and material already recorded in the local storage can be transmitted into the conference computer quickly. The GSI/300Q with flexible desk, the HP [illegible]0 with cassette tape, and the TEK4023 with hard copy attachment have been considered but not used yet. The rental price is about $300 per month, and the purchase price is between $5000 and $8000 with a maintenance cost of $900 each year.

The cost for other supplies (under 15¢ per hour) is small compared to the price of the user terminals (about 50¢ per hour), computer system (about $4 per hour) and long distance charges ($4 to 20 per hour). CRT terminals need no paper or ribbons, but the hard copy attachment requires light sensitive paper at 10¢ per sheet. Thermal printers require special papers that cost about $5 per three hundred feet (or about three times the cost of regular paper). Some typewriters require special ribbons. The cost of these ribbons per page of typing is about twice that for regular typewriter ribbons.

SUMMARY

Computer and communications technologies are of considerable importance in the future of education. Many of the persons that educational institutions hope to reach will not travel to the traditional sites of learning, or will not schedule group participation at the traditional times, or tolerate semester schedules for access to information and certification of accomplishment. Computer conferencing has a potential that should be explored now in anticipation of the very low cost of automatic information processing which is predicted.

Teleconferencing in Light of Meeting University Needs

The source of students for the University of Michigan is changing. Many more are not resident, some commuting great distances or attending special classes only occasionally. Programs for non-resident students will be expanded through a proposed "extended graduate university" by which persons working full-time may be able to study for advanced degrees.

Non-traditional students already play a large role in the Flint and Dearborn campuses of the University of Michigan, and through special programs such as Extension Service. Telecommunications, and computer-based conferencing in particular, will play an important role for the students who come from other sites and contexts to do university work. The computer can be helpful in scheduling, program planning, and related communications. Potentially the computer is a very important tool for storage, retrieval, and organization of information that describes programs, and for the organization of information that is the substance of instruction.

Computer-based communication makes important contributions to the activities of faculty involved in teaching. First, it facilitates individual communication by one or a small group of faculty members with many more students than would be possible through face-to-face meetings. Second, it extends the benefits of a conversation with one individual, since it may be stored and processed in the computer to be adapted and

carried over to serve the needs of others in similar situations. Third, computer-based communication can carry over to scholarly work. For example, the text of the more effective seminar discussions carried on through the computer may be adapted for use in textbook writing or even in research communications. In some fields, the substance of seminars, including computer-based models, can itself be a direct contribution to research in that field. Of course, some faculty members find the process of computer-based conferencing the subject of research itself, as in education, psychology, sociology and other fields.

The University needs to pay more attention to extending job opportunities for graduate students. For example, many more students are being prepared in the field of psychology than there are jobs. Nevertheless the field of social and psychological services is expanding rapidly, and counseling for careers should help students find rewarding jobs. Furthermore, additional multi-disciplinary programs will help prepare students to meet social needs through employment.

Computer-based conferencing is considered by some to be an expensive tool; others warn that it is completely untested. However, more than a dozen uses to date on the University of Michigan campus have demonstrated practical contributions.

Even though computer-based conferencing has not passed out of the research stage, even though the available time sharing system (MTS) is not particularly well-suited to economical and wide-spread access for students, carefully selected development projects already have found a place in the operation of the University.

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ATTACHMENT: SAMPLE OF CBE SEMINAR

```
 source crlt:cbe  [typing by user is shaded]
#$SET ECHO=OFF
#EXECUTION BEGINS


 CONFER II - designed by Robert Parnes
>
>Conference on Computer Based Education (CBE)
>DO NOT COPY (OUTSIDE MTS) OR QUOTE WITHOUT PERMISSION
>Karl Zinn, organizer (763-4410)
>
>Last notice:  Feb 21  re availability of PLATO demo at U-M (or see item 58)
>
 YOUR CURRENT BRIEF NOTICE IS:
 I check for messages and new items each weekday and most weekends
 PRESS RETURN TO KEEP THIS NOTICE, OTHERWISE
 YOU MAY ENTER A BRIEF NOTICE ON ONE LINE
     [<RETURN> key was pressed]

 DO NEXT?  notices
>NOTICES FOR CRLT:CBE
>Feb 21:  Hilde Gonce in the School of Medicine has a PLATO terminal on campus
>for a time (to demonstrate the terminal and its potential uses on MTS, ultimately,
>more than to demonstrate PLATO).  Those interested should contact her at 4-2157.
>
>Jan 8:  Luis Osin will present "psychological parameters in a model
>for a student" at MHRI Thur 15 Jan at 3:45 (tea 3:15).  He might be
>available at other times Thursday (or Wed or Fri) to talk with persons
>interf   [<ATTN> key was pressed]
>ATTN!

 DO NEXT?  agenda
 AGENDA CATEGORIES
     NATIONAL ORGANIZATIONS AND PROGRAMS
     SURVEY OF ACTIVITIES AND RESOURCES AT U-M (FOR INSTRUC. COMP.)
     MERIT COMPUTER NETWORK (MSU, WSU AND UM)
     SOFTWARE FOR INSTRUCTIONAL COMPUTING
     GRAPHICS (INCLUDING COMPUTER-GENERATED FILMS)
     SMALL COMPUTERS
     LAST ITEM ON AGENDA
     PARTICIPANT BACKGROUND AND INTERESTS
     INFORMATION SYSTEMS IN EDUCATION, BROADLY DEFINED
     AGENDA
 WHICH CATEGORY?  graphics
     GRAPHICS (INCLUDING COMPUTER-GENERATED FILMS)
 ITEMS IN THIS CATEGORY
 11
 THESE ARE NOW THE * ITEMS
```

```
DO NEXT?  votes 11 novote

ITEM= 11      11:05:34 11-04-75  LINES= 27  PRIME=9    NEXT=
ADLER, ALFRED
using computer graphics to generate video tapes.

  VOTES
Perhaps you could make the tapes available at the UGLI.
ok
later, perhaps.
nice

DO NEXT?  enter
ENTER NUMBER OF ITEM THAT MOST INSPIRED THIS ITEM:  11
ENTER YOUR TEXT. TERMINATE WITH $ENDFILE
>Adler entered information about computer graphics and video tape
>presentation to classess (or individual study).  Others have expressed
>interest in instructional graphics indirectly.  However, very little has
>been siad through items in this conference.  Can someone tell us
>what is going on at the Engineering Graphics Lab or in the Architecture
>facility for computer graphics or elsewhere that has implications
>for instructional use 66 graphics?  Does anyone have experience with
>the Tektronis 4051?      ↖ [overstrike for immediate correction]
>\
TO EDIT TEXT OF ITEM ENTER E:  e
:alter 4 ;ia;ai;
:     4     been said through items in this conference.  Can someone tell us
:stop
ENTER THE HEADER FOR YOUR ITEM ON ONE LINE
request for information about instructional use of graphics at Michigan
ENTER NUMBER OF ITEM YOU RECOMMEND BE READ NEXT:
TO ABORT ENTRY, PRESS <ATTN>. OTHERWISE...
ENTER LIST OF ITEM NUMBERS FOR REFERENCING

YOUR ENTRY IS NOW ITEM 59

DO NEXT?  agenda graphics
   GRAPHICS (INCLUDING COMPUTER-GENERATED FILMS)
ITEMS IN THIS CATEGORY
11
THESE ARE NOW THE * ITEMS

DO NEXT?  transmit
ENTER YOUR MESSAGE. TERMINATE WITH $ENDFILE
>AT, would you contact people outside of CRLT:CBE who might have
>useful responses to the request for information about instructional
>grphics in #59?  If you don't
                   they don't want to join the conference, get  [backspace to correct]
>information from them, edit it, and give to staff to enter (with
>reference to the source).  Within 5 days would be timely.
>\
TO EDIT COPY OF MESSAGE ENTER E:
ENTER RECIPIENT (OR PRESS RETURN):  ad
OK? TO SEND TO ADLER, ALFRED :  ok
MESSAGE SENT
ENTER RECIPIENT (OR PRESS RETURN):
```

```
DO NEXT? reminder
ENTER REMINDER NOTE. TERMINATE WITH $ENDFILE
>Check with Al re replies outside CBE to #59 (graphics)
>\
TO EDIT REMINDER ENTER E:
ENTER EFFECTIVE DATE FOR REMINDER (EG. 02-28-78): +8
REMINDER POSTED FOR  03/07/76

DO NEXT? items new

ITEM= 59      15:15:08 02-28-76  LINES= 8  PRIME=11   NEXT=
ZINN, KARL
request for information about instructional use of graphics at Michigan

Adler entered information about 1

GIVE YOUR FEELINGS AND/OR CURRENT VOTE ON ONE LINE
and what about instructional graphics in the School of Dentistry

... [some activity not shown in this example]

DO NEXT? agenda software
    SOFTWARE FOR INSTRUCTIONAL COMPUTING
ITEMS IN THIS CATEGORY
14    16    18    22    23    24    25    26    29    32
34    41
THESE ARE NOW THE * ITEMS

DO NEXT? descriptors *

ITEM= 14      13:15:18 11-11-75  LINES= 14  PRIME=      NEXT=
ZINN, KARL
request for information on use of instructional computing software
       REF TO ITEMS
       REF FOR ITEM 15   BARNARD, RUTH M.
 PRIME REF FOR ITEM 18   ZINN, KARL

.... [other activity]

DO NEXT? stop
>At this time UCI=OFF. Bye.
#EXECUTION TERMINATED
#signoff
#SFHC 14:42:16-15:33:29 SAT FEB 28/76
#TERM,LOW,UNIV
#ELAPSED TIME        51.217 MIN.          $1.51
#CPU TIME USED         3.158 SEC.          $.91
#CPU STOR VMI          1.466 PAGE-MIN.     $.25
#WAIT STOR VMI        23.195 PAGE-HR.
#DRUM READS          3468
#APPROX. COST OF THIS RUN IS    $2.67
#DISK STORAGE      1763     PAGE-HR.       $.15
#APPROX. REMAINING BALANCE:    $33.52
```

[about $3.10 per hour]

CONFERENCES lists topics and (potential) participants
(last update 31 March 76, KZ)
(for more information call Karl Zinn, 313/763-4410)

Enter conference with SOURCE command. Procedures will be explained by the software. Primer and other guides are available from CRLT (3-0158), 109 E. Madison, Ann Arbor MI 48104.

crlt:ORGANIZER (current) - Chris Hench, organizer
To share ideas about organization of conferences.
To critique draft of an Organizers Guide for CONFER.
To answer questions from organizers about their roles in CONFER use.
January through about April.

mnet:CAUCUS (current) - Chris Wendt, organizer
To provide a forum for discussion of MERIT Network design and uses.
To provide consultation to Network users.
For communication among MERIT staff on three campuses.
January (indefinite).

crlt:CBE (current) - Karl Zinn, organizer
To explore potential computer-based education (CBE) systems for the University (and the state of Michigan). Particularly to provide information and suggestions for the University Committee on Computer Policy and Utilization (UCCPU) at the time of review and planning of computing resources for use in instruction. Many subgroups, including AERA panel members preparing for annual meeting, and faculty at community colleges sharing ideas about computer uses and resources.
November (75) through June.

crlt:CREDITS - Karl Zinn, organizer
Project CREDITS staff meeting with advisory/oversight/monitor participation.
April (76) through June (77)

crlt:ISTA (current) - Karl Zinn, organizer
Planning committee for ISTA Congress to be held in Ann Arbor October 1976. Participants are from national and local planning committees.
October 75 through October 76.

crlt:CONDUIT (current) - Karl Zinn, organizer.
Discussion of computer program exchange in education via CONDUIT organization. Participants are members of national advisory committee.
March through April 76.

k4hs:RP.CONFER (inactive) - Bob Parnes, organizer
To test new conferencing software.
To explore the parameters of computer assisted conferencing.
To discuss potential uses.
March (75) through February (76).

Conferences of local interest include:
staff discussions of CRLT, Stat Census Committee;
proposal development in Nursing Research, Stat Lab;
dissertation discussion of Michael-David BenDor;
classes in Residential College (1), Nursing Research (3),
Law (1), and Institute for Public Policy Studies (1).

STAT:CON.CENSUS (tentative)
To provide means for discussion of computer programs for statistics and their uses. To invite comment on the University Census of STatistical Programs. To encourage consultation on effective use of computing in statistical data processing.
Projected for April (76) through February (77).

CRLT:EXTEND (tentative) - Karl Zinn, organizer
To offer on-line consultation and information services of Project EXTEND. To assemble comment on interinstitutional resource sharing. To encourage use of available resources for planning and evaluation of new programs within the state.

MATCH.RESOURCE (tentative)
To explore computer assistance and other means to help the University community match up excess resources with needs elsewhere for those resources: equipment,supplies, personnel, ... Perhaps this conference will touch on matching potential resources with the interest profiles of personnel, eg, RFP's with researchers. A subgroup might look at implications for wider community.
Outcomes: DRDA planning group report?
Karl Zinn, Wes Vivan, Jim Hansen, Fred Kochen,
E. Daniel Ayres, James Lee (or someone else at DRDA),
(someone in research office, eg, Al Zander)

AAAS.VALUES (concluded) - Karl Zinn, organizer
To review preliminary reports from AAAS Workshop on technology and values, particularly to assemble persons and programs which might propose to NSF and/or NEH projects dealing with the topics suggested.
June through August 1975.

TECH.VALUES (concluded) - Karl Zinn, organizer
To set agenda and resources for conference and related work on the impact of technology on values in higher education.
(See Karl Zinn for proposals on this topic).
May through August 1975.

CONF.AGREE (concluded)
To explore agreements related to computer conferencing, including rights, liabilities, incentives, responsibilities, ...
March through April 1975.

CONFER DOCUMENTATION

(Dates of current revision are indicated for each item.)

(current as of 14 April)

Primer for CONFER II: An Introduction to Computer-based Conferencing. Robert Parnes and Helen Hench. 30 Oct 75
- Introduction (7 pp) 30 Oct
- Part I: Sample Interaction (14 pp) 30 Oct)
- Part II: Trial Use (10 pp) 30 Oct
- Problems ("What to do if....") (2 pp) 30 Oct
- Part III: Intermediate Guide (9 pp) 10 Dec (approx)
- Appendix on Changing ID (1 p) 29 Dec
- Addendum to Primer (2 pp) 2 Feb 1976

Reference Guide for CONFER II: Notes from On-line Documentation. Robert Parnes. 8 Mar 76. (38 pp)

Organizing a Computer-based conference: A Guide for Persons Using CONFER on the Michigan Terminal System (MTS). Karl L. Zinn, Robert Parnes and Helen Hench. Draft 22 January 1976
- Introduction (2 pp)
- Rationale for Computer Assistance (6 pp)
- Procedures for Maintaining Activity (5 pp)
- Technical Information: Setting Up and Maintaining Files (7 pp)
- Use Costs for Computer-Based Conferences (3 pp)
- References (1 p)
- Suggested Readings on Computer-based Conferencing (2 pp)
- Appendix I: CONFER Documentation (1 p)
- Appendix II: Reference Info for use of MTS and Termianls (7 pp)
- Appendix III: Samples of Sourcefile Information (6 pp)

Abbreviated User Guide for CONFER II. Robert Parnes, Helen Hench and Karl Zinn. (in preparation for 23 Apr 76) (8pp)

Sample Approaches to Use of CONFER: Transcripts from MTS. Karl L. Zinn and Robert Parnes. (in preparation)

Computer-based Educational Communications at the University of Michigan. Karl L. Zinn, Robert Parnes and Helen Hench. 25 Feb 76 (20 pp)

Computer-assisted Conferencing Used in College Teaching to Explore Group Process. Robert Parnes. (in preparation)